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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,475	02/24/2006	Haruyuki Makio	1155-0293PUS	8543
2292 7590 09/04/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
ZEMEL, IRINA SOFIA				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
09/04/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

**Application No.**

10/569,475

**Applicant(s)**

MAKIO ET AL.

**Examiner**

Irina S. Zemel

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that the polymer is obtained "from only an olefin...". This clause is confusing since it is not clear whether the polyolefin is obtained from only one of the listed monomers, i.e., represents a homopolymer, or can be made from any one of the listed monomers in combination. It is especially confusing in view of claim 3 which recites that step 2 can be repeated n times each time using a different polyolefin each time (not "only an olefin"). Applicants are advised to use more conventional language from recited Markush group such as "selected from the group consisting from".

Claim 1 recites Mn, but does not define it.

Claim 3 and 4 are very confusing as it is not understood what constitutes each step:

Step 1 requires bringing "it" into contact with "(C)", however, what constitutes "it" is not clear or defined;

Step 3 requires bringing "the resultant" in contact with (D), however, it is not clear what "the resultant" is and what it defines. It is further noted that neither step 1 nor step 2 require any reaction to take place, even further making the term "resultant" confusing;

Step 3 requires a chemical conversion, but it is not clear what exactly is being converted and into what it is converted.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by 'Synthesis of Telechelic polypropylene with a vanadium-based living polymerization catalyst', by Murata et al., (Macromol. Rapid Commun. 1998), (hereinafter "Murata"), or WO 02/42340 to San-Ei Kougyou Corp., (hereinafter WO '340) (US equivalent 7,125,834 is used as English translation in the rejection set forth below), or US Patent 5,731,383 to Nubel et al., (hereinafter "Nubel") or "Living and Block Copolymerization of Ethylene and  $\alpha$ -Olefins Using Palladium (II) -  $\alpha$ -Diimine Catalysts", Macromolecules, Vol. 36, No. 9, pp. 3085-3100, issued May 6, 2003), by Gottfried et al., (hereinafter "Gottfried").

Each of the cited references discloses a telechelic polyolefin with Mw/Mn of less than 1.5.

See, Murata, Table 2 examples of Polypropylene of Mw/Mn of 1/3 with two aldehyde terminal groups, Gottfried, ester terminated polyolefins of Mw/Mn of less than 1.1.

See discussion of Nubel and Sawata from the previous office action incorporated herein by reference. Note that Mn is no longer being claimed in any of the claims, thus rejection over "WO '340 applies as previously applied rejection over Sawaguchi in OA dated 4/3/08.

The invention as claimed, thus, is fully anticipated by EACH of the four cited references.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 3 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murata or Goddfried or WO '340.

The disclosure of each of the Murata or Goddfried or WO '340 is discussed above. Each of the claims 3 and 4 is directed to the product obtained by the specified process. However, the claimed polymers is still defined as the product and is a low molecular weight distribution polyolefin telechelic polymer.

Each of the references disclose such polymer. In addition, the process of obtaining of the telechelic polymers disclosed in each of the references is substantially identical to the claimed process steps. See experimental sections in both Goddfried and Murata, and discussion of Sawaguchi in the previous Office actions. Thus, it is reasonably believed that the disclosed products are inherently substantially identical to the claimed products. The burden is shifted to the applicants to provide factual evidence to the contrary.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 3-4 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

Irina S. Zemel  
Primary Examiner  
Art Unit 1796

ISZ

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